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ABSTRACT

This report is designed to help child care administrators use research to guide the development of comprehensive state systems for child care. The report begins with guidelines for establishing and maintaining child care research projects. The remainder of the report is comprised of five sections addressing key research questions: (1) projecting the cost of child care; (2) parental payments and demand for child care; (3) supply of child care; (4) child care quality; and (5) child care as an investment. Each section contains examples of existing research, a discussion of how the research can be applied, and suggestions for additional research. Two appendices include an executive summary developed by the Oregon Childhood Care and Education Data Project for data for community planning and information on making sliding fee scales work for families. Contains 47 references. (KB)

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Using Research to Improve Child Care for Low-Income Families

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Prepared For:

Child Care Bureau
Administration on Children, Youth and Families
Administration for Children and Families
Department of Health and Human Services

May, 1997

DEPARTMENT OF HEALTH & HUMAN SERVICES

Administration for Children and Families
Administration on Children, Youth and Families
330 C Street, S.W.
Washington, D. C. 20201

May 13, 1997

Dear Colleague:

I am pleased to present *Using Research to Improve Child Care for Low-Income Families*. This report is a synthesis of major issues, policy questions, available research findings and information needs in child care policy, presented in a form that can provide a framework for ongoing dialogue and action by the research community in partnership with state child care administrators and other key stakeholders.

This report builds upon work at the *Child Care Policy Research Symposium*, sponsored by the Child Care Bureau, Administration on Children, Youth and Families, Administration for Children and Families, US Department of Health and Human Services, held in June 1996 in Washington, DC. The *Symposium* brought together researchers, child care policymakers and state and federal staff for a unique opportunity to discuss current research efforts and the research needs of state child care administrators.

I hope that *Using Research to Improve Child Care for Low-Income Families* will help provide a foundation for policymakers and the research community in each state to form partnerships around new child care policy research opportunities. We invite you to share it as broadly as possible in your state, tribe, or community. Best wishes in your efforts and thank you for your on-going dedication to the children and families you serve.

Sincerely,

Joan Lombardi

Joan Lombardi, Ph.D.
Associate Commissioner
Child Care Bureau

Acknowledgments

This report is the result of several national meetings sponsored by the Child Care Bureau, Administration on Children, Youth and Families, Administration for Children and Families, U.S. Department of Health and Human Services. The June 1996 *Child Care Policy Research Symposium*, a half day event in Washington, D.C. bringing together researchers, child care policymakers and state and federal staff, provided the framework for the report. The September 1996 State Administrator's Meeting, also in Washington, DC, provided an opportunity for state child care administrators to review and offer suggestions, additions and revisions to an early draft. Joan Lombardi, Associate Commissioner, Child Care Bureau, and Pia Divine, Child Care Bureau, also provided thoughtful feedback and review of this report.

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INTRODUCTION

The purpose of this report is to help child care administrators use research to guide the development of comprehensive state systems for child care. The report begins with guidelines for establishing and maintaining child care research projects. Key questions are then posed in five areas:
1) projecting the cost of child care; 2) parental payments and demand for child care; 3) supply of child care; 4) child care quality; and 5) child care as an investment. Following each set of questions are examples of existing research, along with a discussion of how the research can be applied and what additional research is needed. A comprehensive list of all existing child care research has not been included in this report.[1] Rather examples of studies that specifically respond to key questions are emphasized.

In this report, the term *child care* means the full range of services used by families to educate and nurture young children. It is used as an inclusive term to mean programs that provide early childhood care and education to children from birth to age five, and programs for school-age children before and after school and during vacations. These services may be delivered in a variety of settings under differing auspices with diverse program purposes, philosophies, and policies. The programs may be located in child care centers, nursery schools, preschools, Head Start centers, or workplace programs; they may be in the child's home or in the home of a provider; they may be in elementary schools; they may be part-time, part-day, part-year, or full-day and year-round; they may be non-profit or proprietary; they may be public or private, and regulated or regulation-exempt.

The key questions posed in this report are the synthesis of two events: 1) a *Child Care Policy Research Symposium*, held in Washington DC on June 19, 1996 which brought together state child care administrators and policy researchers from around the country to discuss issues related to welfare reform, low-income working families, and child care; and 2) *The Annual Meeting of State Child Care Administrators: The Changing Child Care Picture*, held in Washington D.C. September 9-10, 1996 where a draft of this product was distributed for comments and suggestions. This was followed by an extensive review of existing research which culminated in identifying examples of how available research provides answers to some of the questions and what information gaps exist.

STEPS AND GUIDELINES FOR RESEARCH

Child care needs are a shared responsibility of parents, employers, and communities, as well as government. Child care operates primarily as a private, fee-for-service market in which parents purchase care for their children in order to work or participate in education or training opportunities. Government, particularly at the state level, influences child care in a variety of ways, which include establishing and enforcing regulations, providing grants to expand the supply and improve the quality of child care, educating consumers on child care options and quality measures, and subsidizing the cost of child care for low-income families or establishing

[1]For a comprehensive discussion of child care research, see Phillips, D. Ed. *Child Care for Low-Income Families*. Board on Children and Families, National Research Council, Institute of Medicine. Washington, DC: National Academy Press, 1995.

payment systems (such as vouchers) that provide low-income parents with the economic means to select and purchase child care of their choice.

While some government actions affect families at all income levels, government is particularly concerned about low-income families. Resources are allocated to ensure that these families have access to the child care they need to become self sufficient and that their children receive the early care and education they need to succeed. To this end, government needs information that can help determine if public funds have been invested in ways that meet these objectives. Research can equip state administrators with data that can help them make decisions about allocation of these public funds.

Research can be helpful in several ways. Data and analysis can be used to:

1) Guide overall policy direction.
   It can establish justification for what is being done and meet the needs of children.
2) Guide implementation of specific policies.
   It can help to answer questions about current proposed care policies.
3) Improve program and administrative efficiency.
   It can provide the information needed to monitor programs and help them run more efficiently and successfully. Ongoing monitoring of programs can also trigger further questions.

There are eight steps for state administrators to follow in using child care research.

STEP 1 Determine who is the audience and what key questions need to be answered. For example, is a policy question being asked? Or is the administrator building a case? Where is the state headed?

STEP 2 Gather people who can help refine and answer the questions, including agencies and individuals who share a common motivation to improve child care in the state. Find researchers from inside or outside the government who have a mutual interest in finding the answers to the questions and/or with whom you can contract to interpret existing research and conduct new research in the context of state programs. Determine resources that make this collaboration possible (e.g. in-kind support, foundation funds, or allocation of funds in state budgets).

STEP 3 Meet together early in the process so that inquiry is shaped by input from policy makers, practitioners, and the research community. Researchers and policy makers working together can refine the policy questions and translate them into researchable terms.

STEP 4 Agree on the important questions to be answered.

STEP 5 Determine what kind of data are needed to answer the questions.

STEP 6 Assess the availability of data, the feasibility of using existing data, additional data needs and how these data can be collected.

STEP 7 Determine what kind of analyses will produce the findings to answer the questions.

STEP 8 Determine how to use the findings to drive state-level and community planning. Determine the best way to report the findings that will facilitate action steps.[2]

Guidelines for maintaining research as a useful tool for improving child care over time:

1) Develop a common language.

Recognize that policy makers, practitioners, and researchers often speak very different languages. Through the process of discussion and deciding what is important and feasible, common language will develop.

2) Understand, respect, and respond to the different needs of policy makers, practitioners, and researchers.

Effective research identifies and responds to the questions of policy makers and practitioners. To this end, policy makers need to think carefully and critically about their research needs, and pose questions and provide information to researchers in a timely fashion. Research staff need to respect the multiple roles and responsibilities of state administrators and work closely with their staff to simplify data collection and establish realistic deadlines.

3) Remain flexible.

Research methodology can often be stringent in design. Policy makers and practitioners may be bound by politics, budgets, and complex bureaucracies. Researchers, practitioners, and policy makers must maintain flexibility and creativity throughout the process of gathering and analyzing data. Unanticipated technical and political issues are bound to occur.

4) Institutionalize the research partnerships.

Once partnerships have been established, institutionalize this capacity so that research and policy development links continue over time. Ongoing efforts are more likely to produce a more comprehensive, valid, and useful body of research.

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[2]An example of summary of a research paper which is accessible to all audiences, is "Child Care and Employment Turnover: Executive Summary" (Collins and Hofferth, 1996).

5) Work with state and community level policy makers to develop data systems that better meet the needs of the users.

Over the long haul, new data systems may be needed to provide the information required for effective research and evaluation. In the short term, it may be possible to modify existing systems. Remember that data collection is most effective when established procedures make it easier for line workers (i.e. intake workers, case managers etc.) to do their jobs, and simultaneously gather data. Additionally, bear in mind that all child care is local. Decisions about needs and resources should be based on local data as well as seen in relation to statewide or national averages and trends.

KEY RESEARCH ISSUES AND QUESTIONS

Several key questions that were posed by child care administrators during the June Symposium are identified below, followed by references to research that addresses some of these issues and specific examples of how these data can guide policy making.

I. PROJECTING THE COST OF CHILD CARE

Key Question: How can we accurately project future costs for child care?

Subquestions:

- What families are most likely to use paid child care?
- What types of child care do these families need and use?
- How many hours of care do these families need each day?
- How do child care needs change over time?
- What is the current and future need for child care subsidies among families at various income levels, with different family compositions, with children of various ages?
- How much does child care actually cost taxpayers once consideration is given to tax revenues generated by families who are able to work as a result of child care subsidies?
- What portion of the actual cost of child care do parents pay?

Examples of Existing Research

Following are a few examples of research that can help answer cost projection questions, along with a brief description of how this research can be applied.

State Studies Every two years the Oregon Population Survey obtains information from residents that helps the state evaluate progress toward achieving its benchmarks, a set of broad strategic goals.[3] This survey provides data that can help answer the first five subquestions noted above, as well as a number of additional questions. These data are available for the state as a whole and for each individual county. In addition to the population survey, Oregon conducts a biennial child care market rate survey, maintains automated child care licensing data, and has established a set of common data elements used by the statewide child care resource and referral (CCR&R) system to collect and maintain information on the supply of child care. Data from all of these sources can help to ensure more accurate cost projections and support planning in general. See

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[3]The Oregon Population Survey is conducted by outside contractors for the Oregon Progress Board and co-sponsored by the State Economist, Demographic Task Force, Oregon Commission for Child Care, and a number of other state agencies. The principal data for the study includes age of child, type of paid care, household income, labor force and marital status of parents. The Oregon Progress Board is a small state agency, independent of any operating agency, and is responsible for establishing benchmarks for the state and evaluating progress in achieving these goals.

Appendix A for an Executive Summary of the child care information obtained from these sources and a worksheet that describes the formula used to calculate the demand for subsidized child care in Oregon.

Because the Oregon Population Survey is conducted biennially it can also indicate whether the demand for paid child care is growing and at what rate, and can specify the types of care where use is growing or declining. This type of trend data can be invaluable in estimating future costs. The survey can also provide data on specific target groups, and compare the needs of these families to the population as a whole. For example, Oregon has data that not only describe which families are more likely to need paid child care (single parent families living alone) but how many hours of paid care those families are likely to need (an average of 45 hours per week, which is significantly more than the 33 hours of paid care used by the average Oregon family). These data can be helpful in making decisions if it becomes necessary to target subsidy funds.

National Studies Sometimes comprehensive statewide data are simply not available. In these cases, national research can be used to help inform cost estimates. Illinois used a combination of census data as well as information from a 1994 study entitled *Child Care Subsidies Increase Likelihood That Low-Income Mothers Will Work* prepared by the U.S. General Accounting Office (GAO) to inform their work. Census data were used to estimate the number of families with incomes at various levels (e.g. 50% of poverty, 75% of poverty, 100% of poverty, and so forth) as well as the number and ages of their children. GAO estimates of the percentage of families who are employed and need child care were applied to the census data to estimate demand. (See Appendix B for sample worksheets that describe how they estimated costs and modeled various parent co-payment schedules.) The per child cost was based on historical data from the state's automated payment system.

In addition to census data, information from two national child care surveys conducted in 1990 -- the National Child Care Survey (NCCS) and a Profile of Child Care Settings (PCS) -- can be helpful in obtaining data to develop cost projection models. These surveys were conducted in the same areas of the country and report information from the perspective of parents (the NCCS) and providers (the PCS). A few examples of helpful substudies based on these data include:

- Brayfield, Deich, & Hofferth (1993) looked at the types of child care used most frequently by families with incomes below $15,000 and found that family composition (e.g. single or dual parent) and employment status significantly affected the type of child care used by a family. Single employed mothers were much more likely to use nonrelative arrangements (family child care homes and centers) and multiple child care arrangements than were other low-income families. It is likely that a great majority of the families who leave the welfare roles will fit the profile of a single employed mother with an income below $15,000, making these data particularly helpful in estimating potential costs.

- Another NCCS substudy reinforced the Oregon finding that families headed by an employed single mother are the most likely to pay for child care (Hofferth, 1995).

State Administrative Data Illinois and Maryland are currently working as part of a research team, lead by the National Center for Children in Poverty (NCCP), focused on developing new ways to gather data from the administrative systems states use to determine eligibility and pay for publicly subsidized child care. The goal of the project is to obtain state-specific data that can be used to inform policy making (Child Care Bureau, 1996).

Florida, Alabama, and Massachusetts make up a Tri-State Child Care Research Partnership that is currently compiling state-specific data on hours, types, and characteristics of child care used by families. The Partnership is also gathering information on provider reimbursements to determine the actual cost of child care as well as parent fees (Child Care Bureau, 1996).

Local Data A high-profile consortium of community leaders in Rochester, New York was concerned about the county's growing waiting list for subsidized child care. To help identify possible solutions and estimate potential costs, the group conducted a survey of families on the waiting list. The survey found that most of the families were single parents and many had only one child; 25% of the families had incomes below poverty and the average income was $17,000 per year; almost 90% of the families needed child care subsidies because they were employed; and the families were not clustered in one particular neighborhood but resided throughout the city and county. In addition to providing information about the families, the survey allowed the local social services department to update its waiting list.

Alternative Approaches to Projecting Costs The portion of child care costs paid for by government is typically calculated as the amount federal, state, and local governments allocate to subsidize this service. But unlike many other social services, child care subsidies are directly related to employment. Families that receive child care subsidies are able to go to work, and as a result, they generate additional tax income for the government -- income that actually offsets expenditures for child care. By taking these increased tax revenues into consideration it is possible to calculate what child care *actually* costs taxpayers. Three North Carolina organizations (the Day Care Services Association, the North Carolina Rural Economic Development Center, and the North Carolina Justice and Community Development Center) recently joined forces to develop a model to do just that. Their report, *Child Care Subsidy: An Analysis of Child Care Subsidy as an Investment for North Carolina* (Rohacek & Russell, 1996), develops and applies a model that includes the sources of tax revenue that come from family earnings and expenditures, as well as the taxes paid by the child care industry. This report reveals that in 1993 a North Carolina family earning around $15,000 per year, and receiving a monthly child care subsidy of $212 and receiving an Earned Income Tax Credit of $92 per month, generated $351 per month in federal, state, and local tax revenue -- a *net gain* of $47 per month. (Their calculation of net gain does not include the additional welfare savings that are realized by the employed parent.) This

finding shows that increasing the amount available for child care subsidy will result in a net gain for taxpayers and society as a whole.

Additional Research Needs

The more accurately we can identify and describe the use of child care by families in various income levels, the more accurate our cost projections will be. To this end, research needs to focus on developing methods for obtaining state and local data on the types of families most likely to use paid child care, the types of care these families use, the amount of care families need and use (and how this usage changes over time), and the price families pay for various types of care. Research partnerships that obtain on-going data from current administrative systems will be particularly helpful. In addition, 1990 national data (NCCS & PCS) need to be updated.

II. PARENTAL PAYMENTS AND DEMAND FOR CHILD CARE

Key Question: What should parents pay for child care?

Subquestions:[4]

- How much do families at various income levels currently pay for child care?
- How does price (including co-payments) affect the child care choices made by families? Do these decisions vary by income, family composition, or other factors?
- Who currently receives help in paying for child care?
    a. At what income levels, on average, do families enter and exit the subsidy system?
    b. What are the most common reasons that families have become eligible for subsidized child care?
    c. How long do families typically remain in the subsidized child care system?
- What is the impact of other subsidies (e.g. Dependent Care Tax Credit, Medicaid or other publicly funded health care plans, food stamps, housing subsidies) on a family's ability to pay for child care?
- What are the most appropriate co-payment levels for child care subsidies? Should the percentage of income paid for child care be the same for all families or should lower income families pay a lower percentage of their income for child care? Should *any* co-payment be collected from families with incomes below the poverty line?

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[4]The policy implications of child care market rates, and questions concerning methods of establishing child care rates, are not discussed in this paper. See *Promoting Access to Quality Child Care: Critical Steps in Conducting Market Rate Surveys and Establishing Rate Policies* (Stoney, 1994) for a comprehensive discussion of this issue. The report is available from the Children's Defense Fund (202) 628-8787.

- What are the trade-offs between quantity and affordability? Is it possible to increase child care subsidy co-payments in order to serve more families or will the co-payment increases drive families out of the child care subsidy system?
- What is the effect -- on parents and programs -- when child care/early education programs in low-income neighborhoods impose or increase fees?

Examples of Existing Research

Following are a few examples of research that can help answer some of these co-payment and demand questions, along with a brief description of how this research can be applied.

State Studies Based on data from the biennial Oregon Population Survey, Oregon has learned that families with incomes below $25,000 spend an average of 37% of household income on child care, while families with incomes over $45,000 spend an average of 5%. They have also learned that families with lower incomes purchase more hours of care per week than high income families (39 versus 42) but, on an hourly basis, spend less for the care ($1.38 versus $2.16 per hour). These data can be used to influence a range of child care policies aimed at making child care more affordable, including revising income eligibility ceilings for tax credits and direct child care and early education subsidies as well as expanding the length of time subsidized child care and education is available each day and week.

National Studies When state data are not available, national data can be helpful in informing child care policies aimed at making child care more affordable. For example, data from the Census Bureau's 1993 Survey of Income and Program Participation (SIPP) indicate that employed mothers with children younger than five years of age spend, on average, $79 per week for child care. Families with incomes of less than $1,200 per month spent 25% of that income on child care, while families with monthly incomes of $4,500 or more spent 6% of that income on child care. Caution should be used, however, when using data based on national averages. Incomes -- and the cost of living in general -- vary widely from state to state. Whenever possible, seek out regional or state-specific data.

National data can also be used to better understand the potential consequences of specific child care policy decisions. A recent study, *Child Care and Employment Turnover* (Collins & Hofferth, 1996)[5], found that moderate-wage mothers (those in areas where the median per capita income was between $12,942 and $15,574) were more likely than those with higher or lower incomes to leave their jobs as the price and instability of child care increased. These data suggest that targeting child care subsidies to families at the lowest income levels, or maintaining very low co-payments for families below poverty but allowing sharp co-payment increases above poverty -- a common practice in many states -- may not be the most effective way to promote employment among low-income families.

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[5]This research was based on data from the NCCS and the PCS.

An analysis of NCCS data included in *Caring for Children at the Poverty Line* (Hofferth, 1995)[6] further stressed the need to carefully examine the availability of child care assistance for working poor families. After combining direct assistance and assistance from the income tax system (such as the Dependent Care Tax Credit and the Earned Income Tax Credit) 37% of nonworking poor families, 30% of working poor families, 36% of working-class families, and 37% of middle-class families received child care assistance. In general, nonworking poor families have greater access to direct child care subsidies while working and middle-income families have greater access to income tax credits. But working poor families are often ineligible for direct child care subsidies or tax credits. This analysis lends support to efforts to make state and federal child care tax credits refundable and to increase income eligibility for direct child care subsidies.

Modeling Parent Fee Schedules A number of states have begun to explore various approaches to assessing co-payments in child care subsidy systems. Some examples:

- Policy Analysis for California Education (PACE), a partnership between the Schools of Education at the University of California, Berkeley, and Stanford University, has led the effort to explore various fee options for the California child care subsidy system. Section II of their Phase II report, entitled *California Cares: Child Care and Development Services for Children and Families*, (PACE, 1995) discusses the pros and cons of various fee scales and presents a model of each approach. In addition to calculating the fees charged to parents at various income levels, the models also estimate the potential state revenues generated by each approach.

- A brief summary of the various co-payment models developed by policy makers in Illinois was discussed previously, and is attached in Appendix B.

- Wisconsin enacted a welfare reform law, called W-2, that included large increases in co-payments for child care.[7] As part of its efforts to review the proposed legislation, the Legislative Fiscal Bureau modeled the proposed child care costs for families at various income levels in high- and low-price child care options. The Bureau's report also included an analysis of the potential impact of taxes (including the Earned Income Tax Credit), food stamps, housing subsidies, health care co-payments and child care co-payments on family income, as well as an analysis of the implicit marginal tax rates under the proposal (Lang, 1995).

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[6] In this study, the term working poor included families with annual incomes below the federal poverty level (roughly $13,000 for a family of 3). Working-class included families with incomes above poverty but below $25,000. Middle-class included families with incomes above $25,000.

[7] The child care co-payment policy included in W-2 has been temporarily suspended, due to a strong outcry from parents whose fees would have increased dramatically. An advisory committee has been established to study the issue and recommend alternatives.

Additional Research Needs

Very little is known about the trade-offs between quantity and affordability. Now that federal child care subsidy funds are capped, states will be forced to make some new and difficult decisions about parent fees. A number of states are currently restructuring their child care co-payment schedules. Future research needs to look carefully at the outcomes of these new fee policies. Will higher co-payments make it difficult for families to participate in the child care subsidy system? If so, at what point do the fees result in reduced participation levels? Are certain family types or income levels affected more than others? Do higher co-payments limit parental choice? If so, how? If providers have difficulty collecting the higher fees from parents, does raising co-payments effectively reduce child care provider reimbursement rates? What is the outcome when co-payments are imposed in programs that have not traditionally charged fees (such as Head Start and public school prekindergarten programs)? Other related research needs include determining the impact of economic supports, health care, housing, and other subsidies on a family's ability to pay for child care.

III. SUPPLY OF CHILD CARE

Key Question: When, where, and how should public funds be spent to encourage the supply of child care and/or to make child care more accessible to families?

Subquestions:

- How can we accurately describe the child care options that are available to -- and used by-- all families in general, and to low-income families in particular?
- Should steps be taken to expand the supply of child care in specific communities, or for specific categories of children and families?
- What is the relationship between subsidies and supply?
  a. Will increased subsidies spur increased supply? Or are grants or loans for provider recruitment, facilities development, etc. needed? Must these strategies be linked in order to ensure that child care is available to low-income families?
  b. Will a decrease in available subsidies significantly diminish the supply of child care, especially in low-income neighborhoods?
  c. Do different methods of administering subsidies (e.g. vouchers, contracts, cash reimbursement) affect the supply of child care? If so, how?
- How crucial is location in ensuring access for low-income families? Would subsidizing the cost of transporting children to child care help to address some of the supply inequities?

Examples of Existing Research

Following are a few examples of research that can help answer questions about child care supply, along with a brief description of how this research can be applied.

Data from CCR&R Agencies Many statewide child care resource and referral (CCR&R) networks gather and maintain comprehensive data on child care supply.[8] For example, the Maryland Committee For Children prepares *The Maryland Child Care Demographics Report* (1994) which provides statewide and county-by-county data on the supply of child care. This report includes information on the number of child care providers in each county of the state and specifies which programs are open 8 to 12 hours per day. Density maps that indicate the distribution of child care programs are included, along with charts of past and anticipated growth patterns for home and center-based child care providers. (More detailed, neighborhood- and age-specific data are available in the LOCATE automated system managed by the Maryland Committee for Children.) These data can help to identify the areas of the state -- or even specific neighborhoods -- where additional child care is needed.

An on-going GAO study is collecting CCR&R data from four selected sites (Benton County and Linn County, Oregon; Baltimore City, Maryland; Chicago, Illinois) to determine the current supply of regulated child care in these areas. Specifically, the GAO is analyzing the supply data to determine the overall number and capacity of providers and the number and capacity of providers by age of child in poor and nonpoor areas. To estimate potential new demand by more welfare mothers going into the workforce, the GAO has developed a projection equation using data from SIPP, site-specific caseloads, census, and Health and Human Services quality control data. In addition, state, local and CCR&R staff are being interviewed to discuss other issues affecting the supply and demand of child care for low-income populations.

Data from State Regulatory Agencies Many state child care licensing offices have an automated system that maintains data on the child care programs they regulate. In situations where all child care providers are regulated and a single agency maintains compliance information, these data can be helpful in answering questions about child care supply. But most states do not regulate all child care and early education programs. Moreover, some states have several government agencies (such as departments of health and sanitation, education, parks and recreation, local social service departments, etc.) involved in regulating and/or monitoring child care providers. Coordinating data from all of these agencies can be a daunting task. Additionally, data from regulatory agencies may not include information on the ages of children served, the days and times the program is open, the price of care, and so forth. To address the need for comprehensive data on the supply of child care, a number of states have developed cooperative agreements between statewide CCR&R

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[8]For information on CCR&R statewide data collection efforts, call or write to the National Association of Child Care Resource and Referral Agencies (NACCRRA), 1319 F Street, NW, Suite 810, Washington DC 20004, (202) 393-5501.

networks and state and/or local regulatory agencies. These agreements allow the parties to share data on the supply of child care with the goal of developing more comprehensive, neighborhood-specific data that can be used for planning purposes.

State Studies Gathering and analyzing data on the supply of child care is often only part of the picture. In low-income neighborhoods there may not be a simple connection between the demand for child care and the supply of care. Rather, the supply of care available in the community may be a reflection of the types of child care subsidies that are available. Several states have conducted research to learn more about the relationship between subsidies and supply. Some examples:

- A 1991 study, *Child Care and AFDC Recipients in Illinois* (Seigel and Loman, 1991) found that the Earned Income Child Care Disregard program promoted the use of informal child care arrangements. More than half the families that were currently using child care indicated a preference for center-based programs (centers, nursery schools, before/after school programs) but only 19% were able to use these facilities for any part of their total child care arrangements. The price of child care was the most frequently cited barrier. The amount of money the families received as a result of the disregard was insufficient to cover their child care fees and the cash reimbursement came too late to help with the payments.

- In addition to gathering descriptive data that may be used to project costs and inform an array of child care policy decisions, the Illinois and Maryland research partnership led by the National Center for Children in Poverty (NCCP) (Child Care Bureau, 1996) is currently focusing on using data from CCR&R agencies and state agencies to learn more about the child care markets in which low-income families act as consumers. By conducting a neighborhood-level analysis of these data, NCCP hopes to learn more about the distribution of child care subsidies in specific neighborhoods and how various types of child care subsidy affect the supply of child care in these areas.

National Studies The availability and price of child care can vary widely from neighborhood to neighborhood, even within a very small area. The precise location of a program or home-based provider is crucial. In large cities, even a few blocks can make a major difference in the use of child care. As a result, national data are generally not a helpful resource for estimating the supply of child care in a specific state or community. National data can be helpful however in identifying and understanding the general principles used in analyzing local data. A few examples follow.

- *The Child Care and Employment Turnover* study (Collins & Hofferth, 1996) found that mothers who did not have convenient access to a center-based child care program (within 10 minutes from home) were almost twice as likely to leave their jobs as those who did. In general, the availability of child care appeared to have the greatest effect on *moderate-wage* mothers (those who resided in areas where the median incomes was between $12,942 and $15,574). Overall, the researchers report, living in an area with a greater number of child

care centers per 1000 preschool children was associated with a 15% lower probability of job exit for moderate-wage mothers.

- Access to child care is a significant problem for families who work during non-traditional hours. NCCS data indicate that one-third of employed mothers with incomes below the poverty line (approximately $13,000 for a family of three) and more than one-fourth of employed mothers with incomes above poverty but below $25,000 worked weekends. But only 10 percent of centers and 6 percent of family child care homes reported in the PCS database provide child care on weekends (Hofferth, 1995). NCCS data further indicate that almost half of all families with incomes above poverty but below $25,000 work on a rotating or changing schedule (Hofferth, 1991).

Additional Research Needs

CCR&R networks and state regulatory agencies across the country are beginning to obtain the detailed and neighborhood-specific information we need to accurately describe child care markets. Little is known, however, about the effect of child care subsidies on these markets. Future research needs to focus on this relationship, and help to inform investments in child care supply as well as policies aimed at making child care more accessible to low-income families. Additionally, research needs to help expand our understanding of the role that transportation plays in improving low-income families' access to child care markets. Could investments in transportation systems, rather than additional child care facilities, expand access in some areas? Could the school buses used by public schools and/or Head Start agencies be a viable resource for child care programs as well? If so, how?

IV: CHILD CARE QUALITY

Key Question: What are methods of improving the quality of child care?

Subquestions:

- What are the key predictors of quality child care? What are the most important quality elements that can be adopted at the lowest cost?
- How do consumers evaluate the quality of care in specific child care settings? Are consumer evaluations similar to professional evaluations (such as those based on regulatory standards or evaluation tools such as ECERS)?
- Does regulation improve quality? How? Are certain regulatory requirements -- or certain approaches to regulation -- more likely to promote quality than others?
- Does frequent monitoring of child care programs improve quality?
- What is the role of practitioner training in improving quality? What models are most effective?
- What is the role of technical assistance in improving quality? What models are most effective?

- What are the most effective methods to encourage child care programs to exceed minimum licensing standards? Do these methods improve quality? What is the role of accreditation in this regard?
- When funds are limited, how do we set priorities in promoting quality?

Examples of Existing Research

In May, 1996, Love, Schochet, and Meckstroth published a paper entitled *Are They in Any Real Danger? What Research Does--and Doesn't--Tell Us About Child Care Quality and Children's Well-Being*. The paper, which is part of the Expanded Child Care Options (ECCO) project sponsored by Mathematica Policy Research, reviewed over 36 studies of child care quality. Deborah Phillips also devoted a chapter of her book, *Child Care for Low-Income Families,* to a review of the research on child development, safety, quality, and continuity.[9] The discussion that follows includes a handful of studies that can help to answer some of the questions noted above and that may lead to concrete policy responses. They are by no means the only studies on child care quality.

Several research and evaluation instruments have been developed to measure quality in early childhood care and education environments. The Early Childhood Environment Rating Scale (ECERS) (Harms & Clifford, 1980), which was developed to evaluate quality in center-based care, is perhaps the most well known. This scale measures "global quality" based on seven environmental dimensions: personal care, furnishings/display, language/reasoning activities, creative activities, fine/gross motor activities, social development, and adult facilities/opportunities. Harms and Clifford also developed an instrument for family child care settings called the Family Day Care Rating Scale (FDCRS) (Harms & Clifford, 1989). This scale focuses on space and furnishings, basic needs, language and reasoning, learning activities, social development, and adult needs. While ECERS and FDCRS are not the only instruments used by researcher to evaluate the quality of child care settings, they are two of the most commonly used instruments.

Few research instruments use regulatory or licensing criteria to evaluate program quality. One exception is the Child Development Program Evaluation System (CDPES) (Fiene, et al., 1978) which has been used in Pennsylvania since 1978. Several self-assessment tools based on regulatory or licensing criteria have been developed as well. The self-assessment tool used by Pennsylvania's Early Childhood Education Linkage System (ECELS) (Aronson et al., 1990) is one example.

Each of the measurement techniques described above -- and the many additional evaluation tools that were not described -- has limitations. Child care quality can be based on factors that are difficult to measure (Katz, 1994). To this end, research on child care quality frequently takes a multi-dimensional approach. That is, the research team uses several instruments to measure quality. When interpreting the results of a

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[9] Phillips also edited a book in 1987 entitled *Quality in Child Care: What Does Research Tell Us?*

particular study, it is important to look carefully at the instruments used to measure quality and to understand the implications of these measures.

Despite differences in evaluation instruments and approaches, research on child care quality has consistently found the following dimensions to be most strongly associated with enhanced child well-being (Love et al, 1996):

- structural features (such as lower child-staff ratios and smaller group sizes);
- classroom/caregiver dynamics (including caregivers' sensitivity); and
- staff characteristics (such as education and experience).

Evidence that these dimensions are key predictors of quality, and that they can be directly linked to public policy responses such as regulation and caregiver training, can be found in research on state and national data. Several examples are discussed below.

State Studies That Examine the Role of Licensing and Monitoring A key goal for state licensing departments is to improve compliance with state child care regulations. Yet many states are faced with shrinking staffs and a steadily increasing number of child care programs that must be monitored. A number of states are attempting to target their resources by streamlining the regulatory process and making it more efficient. Research can help to inform these decisions. Some examples:

- Research conducted by Richard Fiene, from the Pennsylvania Bureau of Child Day Care Services and the Pennsylvania State University at Harrisburg, led to the development of a "key indicator" methodology that has the ability to predict statistically the probability that a program will either be in compliance or out of compliance with state regulations. If a program is in compliance with a short list of key indicators, it is likely that the program is in compliance with all regulations. If a program is out of compliance with the key indicators, it is likely that the program is out of compliance with other regulations (Fiene, 1994). Thirteen key indicators were identified; among these, five were identified as the strongest predictors. These include: staff training, director qualifications, lead teacher qualifications, staff-child ratios and group sizes, and children supervised at all times/developmentally-appropriate discipline is followed (Fiene, 1995). This methodology can be used to target monitoring visits and to better understand how to streamline the regulatory process.

- In 1991 the Pennsylvania Office of Children, Youth and Families sought to learn more about the various tools used to measure child care quality. A research team evaluated the quality of care in child care centers using the ECERS and CDPES rating scales as well as self-evaluations conducted as part of ECELS. The researchers found that all three scales were effective in identifying programs of poor quality. (The programs that scored the lowest on the CDPES also scored lowest on ECERS and ECELS.) But among the highest quality programs they found that the highest quality programs were not usually

in *full* compliance with state licensing regulations. Programs that scored highest on ECERS and ECELS did not always score highest on CDPES. While licensing is essential to establishing a basic minimum standard for quality, this research indicates that licensing is not sufficient in and of itself to predict quality child care. The research also reinforced that a licensing indicator system (described above), coupled with a self-assessment process, could shorten licensing visits without losing valuable information. (Fiene, 1991).

- Most recently, Pennsylvania used research to find out whether licensing and monitoring visits should be announced or unannounced. After conducting announced and unannounced visits with a random sample of child care centers and group child care homes, results of the visits were carefully reviewed. Not surprisingly, a significant number of "discrepant citations" were found. (That is, the provider was in compliance at the announced visit but out of compliance at the unannounced visit.) But further analysis revealed that all of the highly discrepant citations occurred with providers who had a history of low compliance with state child care regulations. The researchers concluded that conducting unannounced visits on all providers indiscriminately was not a good use of state resources. A balance of announced and unannounced visits was recommended, based on the providers' history of compliance with child care regulations (Fiene, 1996).

State Studies That Examine The Role of Provider Training Several years ago Florida implemented a new law that tightened child care center teacher-to-child ratios from 1:6 to 1:4 for infants and from 1:8 to 1:6 for toddlers. Education requirements for child care teachers were also increased. Child care teachers must now have at least a Child Development Associate (CDA) Credential or an equivalent. State funds were made available to help staff obtain these credentials. A study commissioned by the state to assess the impact of these changes reported that: children's intellectual and emotional development has improved (including increased language proficiency and fewer behavior problems); "global" quality of the classrooms has improved; teachers are more sensitive and responsive; and teachers' negative management styles have declined. (That is, teachers are less likely to respond to a child's misbehavior by yelling, threatening, being sarcastic or hitting. In some programs these behaviors have been reduced by 75%, Howes, Smith, and Galinsky, 1995).

State Studies That Examine The Role of Technical Assistance Several years ago, the Pennsylvania Bureau of Child Day Care Services forged a partnership with the Early Childhood Education Linkage System (ECELS) of the Pennsylvania Chapter of the American Academy of Pediatrics to improve immunization of children in child care settings. On a quarterly basis, data gathered by the licensing staff are aggregated by the research division of the bureau and shared with ECELS. Staff from ECELS follow up with those programs that have the greatest noncompliance with immunization regulations and provide technical assistance and linkage to pediatric services in the community. ECELS has also used licensing data to target technical assistance efforts around other health and safety issues (Fiene, 1995).

State Studies of Regulation-Exempt Child Care Two states -- New Jersey and Rhode Island -- have conducted research to learn more about the quality of child care provided by "kith and kin," that is, relatives, friends, and neighbors.

- In 1990 the New Jersey Division of Economic Assistance (DEA) evaluated the quality of "approved" child care homes[10] that served families who were participating in REACH, the state welfare reform initiative. DEA staff reported that 71% of the providers they observed maintained all of the required safety items. Only 33% of the providers indicated that they were willing to become part of the regulated child care system, even when they were informed of the higher reimbursement rate available to them as regulated providers. Additionally, through a separate survey of REACH participants, DEA learned that most participants who chose approved homes (over regulated care) did so because they want someone they know to care for their children (State of New Jersey, 1991).

- In 1991, the Rhode Island Department of Human Resources Office of Child Care sought to learn more about the needs of the in-home and relative child care providers from whom they purchase care. To this end, they conducted on-site interviews and home observations of 50 providers, and conducted telephone interviews with a sub sample of 26 parents who had children in the care of providers in the study (Butler, Brigham, and Schultheiss, 1991). The research team concluded that in-home and relative care is a viable part of the child care system, and one that can benefit from closer linkages and more internal cohesion. The team also recommended that support for these providers (such as training or technical assistance) should be based on a family resource and support model that makes a commitment to empowerment and partnership with parents. They did not feel that training focused on building more "professional" child care providers was likely to be well received by this population.

National Studies Caution should be used when basing state-level policy decisions on national research on child care quality. The regulation of child care varies widely from state to state. Since regulations tend to define the key predictors of quality (such as staff-to-child ratios, group size, teacher training, and so forth), research on the quality of child care in one state typically cannot be used to gauge the quality of care in another. National studies can, however, be used to identify some of the key principles that are used to shape state policy. National research has reinforced, for instance, that both good and poor quality child care can be found in child care centers, family child care homes, in-home care, and so forth. National research can also help to explain the relationship between various factors, even though the factors themselves may vary from state to state. *The Cost, Quality, and Child Outcomes* (Helburn et al, 1995) study

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[10]Friends, neighbors or relatives of REACH/JOBS participants who provide care to one or two children or the sibling children of one participant are exempt from child care regulation in New Jersey. These providers -- referred to as "approved" family child care homes -- must receive a health and safety inspection prior to payment.

found, for example, that states with more demanding licensing standards have fewer poor-quality child care centers.[11]

Evaluation of Specific Programs In some cases, evaluations of individual programs or interventions can provide information that is helpful to policy makers. A few examples:

- A study of the effects of NAEYC accreditation on care in military child development centers reported that accreditation improved the quality of care in centers with lower preaccreditation quality as well as in centers that were providing high quality care prior to beginning the accreditation process (Zellman and Johansen, 1994). The role of technical and financial assistance provided by the military is also reviewed.

- The role that technical assistance plays in helping early childhood programs achieve accreditation was explored in an evaluation of the Facilitated Accreditation Project sponsored by the IBM Corporation (Harris, Morgan, and Sprague, 1995). This evaluation suggests that the strength of the local agency and the facilitator involved in providing technical assistance, the regulatory climate, and the local and state early childhood infrastructure all influence likely outcomes.

Alternative Approaches to Measuring Quality Oregon has embarked on a new research project aimed at helping the state to more fully understand quality from the perspective of parents. Specifically, Oregon researchers and policy makers want to know which parents have access to quality child care, which do not, and what can be done to help all parents obtain child care that they feel is of high quality. A key first step in this process is developing a tool that measures quality of child care from a parent's point of view. To this end, Oregon has developed and field tested a questionnaire that includes 140 questions about the child care arrangements currently used by families. In this instrument the elements of quality are divided into six headings: your child's health and safety; enough adults for the number of children; your relationship and communication with the caregiver; the caregiver's ability and the richness of activities for your child; the relationship between the caregiver and your child; and how your child is doing in child care. The questionnaire also gathers information on family composition, affordability of care, work and family flexibility, available choices, hours per week the child is in care, and others. In addition to obtaining information that can be used to inform policy making, Oregon hopes to identify questions that can be included in future versions of the biennial *Oregon Population Survey* and used to help establish and measure progress toward a quality child care benchmark.

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[11]For a comprehensive summary of national studies on child care quality, see the papers prepared by Love et al., 1996 and Phillips, 1987, referred to earlier in this section.

Additional Research Needs

Oregon is conducting ground-breaking research on consumer evaluations of child care quality. Further research in this area is clearly needed. Additionally, we have only limited research on the role of practitioner training and technical assistance in improving the quality of child care. Future research needs to look at these issues in more detail, and to help evaluate specific approaches to training and technical assistance. We are learning more about the role that center-based child care program accreditation plays in improving quality. But we still know very little about what other methods might effectively encourage child care programs to exceed minimum licensing standards, especially among family child care homes. Finally, future research is needed to expand our understanding of child care provided by "kith and kin," and other caregivers who are exempt from regulation.

V. CHILD CARE AS AN INVESTMENT

Key Question: What are the multiple benefits of child care -- to children, families, employers and communities?

Subquestions:

- To what extent do child care funds contribute to the economic development and/or stability of these communities: creating jobs, generating taxes, encouraging the purchase of goods and services?
- For every $1 spent on publicly subsidized child care, what are the reduced expenditures in TANF (Temporary Assistance to Needy Families), Medicaid, and other social services?
- Which children are most likely to benefit from child care and are there particular ages at which the impact is greatest?
- Can we determine which families are most likely to enter the work force, remain employed, and increase their potential earnings if they receive assistance in paying for child care?
- Can we determine which communities and/or child care programs are largely dependent upon public child care subsidies to maintain full enrollment, keep staff employed, and/or keep parent fees affordable?
- Are there specific groups of families, or communities, or child care situations that are most likely to generate matching funds (e.g. from employers or other private sector partners) -- that is, where a small investment of public child care subsidy dollars might encourage contributions from other sectors?

Examples of Existing Research

The following are a few examples of research that address the multiple benefits of child care, along with a brief description of how this research can be applied.

State Studies A number of states have begun to understand the multiple effects of child care and are examining the effects of child care subsidies within the larger context of parents, employers, and communities.

- A recent study, *Child Care Subsidy: An Analysis of Child Care Subsidy as an Investment for North Carolina* (Rohacek & Russell, 1996), examines the immediate economic returns from child care subsidy. The portion of child care costs paid for by government is typically calculated as the amount federal, state, and local governments allocate to subsidize this service. But unlike many other social services, child care subsidies are directly related to employment. Families that receive child care subsidies are able to go to work, and as a result, they generate additional tax income for the government that actually offsets expenditures for child care. This report reveals that in 1993 a North Carolina family earning around $15,000 per year, and receiving a monthly child care subsidy of $212 and an Earned Income Credit of $92 per month generated $351 per month in federal, state, and local tax revenue -- a *net gain* of $47 per month. (Their calculation of net gain does not include the additional welfare savings that are realized by the employed parent.) This finding shows that increasing the amount available for child care subsidy can result in a net gain for taxpayers and society as a whole.

- As noted earlier, Collins and Hofferth (1996) found that moderate-wage earning mothers were more likely than those with higher or lower wages to leave their jobs as the price and instability of child care increased and were more sensitive to the availability of child care.

- Findings from *Parents Receiving Subsidized Child Care: Where Do They Work?* (Lee, Ohlandt, and Witte, 1996), which compares and contrasts employment patterns for the overall labor force in three regions in Florida, have influenced child care policy in this state. In all three areas, workers receiving child care subsidies are much more likely to be employed in retail trade, particularly fast food restaurants and grocery stores, than is the overall labor force. Additionally, industries that traditionally pay higher wages such as construction, manufacturing, finance, insurance, and real estate provide many jobs to the population as a whole but relatively few jobs to workers receiving subsidized child care.[12] These findings were presented to the 1996 Florida Legislature and contributed to the passage of the new Child Care Partnership program that offers matching funds to employers who assume part of the cost of care for employers who are eligible for child care subsidies.

- In California, the *GAIN Family Life and Child Care Study Technical Report* (Meyers, 1992) identified problems with the quality and continuity in child care services encountered by single-parent AFDC recipients. GAIN is a California JOBS program that guarantees child care to participants if they need to work or

[12]This survey is currently being replicated in Oregon, and early findings indicate similar results.

participate in education or training. Results indicated that GAIN dramatically reduced child care barriers while the participants attended job preparation activities. However, children experienced repeated disruptions in child care while their parents were enrolled in GAIN activities. Parents were more likely to leave the GAIN program if they were unhappy with the child care program, if their youngest child was in care a long distance from the GAIN activity, if the child care site did not have a sufficient number of caretakers, or if they distrusted the arrangement or considered it unsafe.

- Minnesota has established goals and indicators called Milestones that are designed to focus planning on priority areas. A state agency is responsible for coordinating data collection and reporting around the Milestones. The results have already been used by the legislature, state agencies, and local groups. For example, the legislature recently created the new Department of Children, Families, and Learning to better coordinate family and child programs, improve program flexibility, enhance local decision-making, and improve public accountability.[13]

National Studies Studies conducted from national datasets can be used to support the effects of increasing child care subsidies on increasing employment of low-income mothers. National studies also demonstrate the importance of quality environments on the development of the brain.

- Analysis of the NCCS predicts that reducing child care costs increases the likelihood that poor, near-poor, and nonpoor mothers will work (GAO, 1994). More specifically, full subsidy to mothers who pay for child care could increase the proportion of poor mothers who work from 29 to 44 percent, and that of near-poor mothers who work from 43 to 57 percent. The results suggest that affordable child care is one of the decisive factors that encourage low-income mothers to seek and keep jobs.

- Children learn from the time they are born, during every moment of the day. New research has identified a number of "critical periods" when brain development is not only rapid and efficient, but can have lasting effects. These "windows of opportunity" open very early in a child's life, often during the first year. A child who misses these windows -- or who is under tremendous stress during this period -- could live with a handicap for his or her entire life. Research is also demonstrating that experience and environment have a much greater influence on brain development than was previously realized (Carnegie Corporation of New York, 1994 and 1996). Children who form strong, lasting relationships with a few attentive adults in safe, predictable environments are more likely to learn and develop the skills they need to succeed.

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[13]For more information call MN Planning at 612-296-3985 or write MN Planning, 658 Cedar Street, St. Paul, MN 55155.

- Experts believe between 4.5 and 5 million children are regularly taking care of themselves, or are in the care of a sibling under age 14 (Miller et al., 1996). Children of employed mothers are somewhat more likely to spend time in self- or sibling care, regardless of family income (Hofferth et al., 1991). In a recent study by the School-Age Child Care Project (SACCP) on out-of-school time in three low income communities, the most surprising finding was the relatively high percentage of *young* children who regularly spent time without adult supervision (Miller et al., 1996). Sixteen percent of children between the ages of 4-7 regularly spent time alone or in the care of a sibling under age 12. Other studies found that the risk of problem behaviors escalated significantly with increasing time spent in self-care and early onset of self-care. Children in self-care more than 11 hours per week were 1.5 times more likely to be truant than those not in self-care, and those who began self-care in elementary school were 2.7 times more likely to engage in heavy alcohol use than those who began self-care in junior high school (Dwyer et al., 1990).

Program Specific Studies *Long-Term Outcomes of Early Childhood Programs*[14] (Future of Children, Winter 1995) reviews outcomes of child-focused and family-focused programs. Results indicate that early childhood programs can have large and persistent benefits for children in terms of cognitive achievement and social outcomes. Specifically, research indicates that subsidized child care as an investment has successfully demonstrated that high quality early childhood education can prevent substantial future costs to society.

- Several longitudinal studies, including the High/Scope's Perry Preschool study indicate that high-quality early childhood education for disadvantaged children is a highly effective way of improving their life chances (The Future of Children, 1995; Berrueta-Clement et al., 1984). Disadvantaged children who had attended a good preschool were more likely to graduate from high school, enroll in postsecondary education, and find themselves employed. They were also less likely to be assigned to special education classes, commit crimes, become teenage parents, or receive welfare assistance. As positive as these educational and social outcomes are, it is the cost information that has proven to be most persuasive to policy makers. The costs to taxpayers of NOT operating a 1-year early education program of high quality for disadvantaged children are 6 times that of providing the service.

- In a recent paper on the Abecedarian project, Campbell and Ramey (1994) report that low-income children who were enrolled in an intensive early education day-care center as preschoolers have higher intellectual and academic

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[14]Concerns about the evidence of long-term benefits from early childhood programs are organized around five general questions of: 1) What are the long-term outcomes of early childhood programs? 2) What can be learned from the experience of the past three decades to help design more effective programs? 3) Can early childhood programs provided in a routine manner on a large scale yield the expected benefits? 4) How applicable are lessons learned from programs that operated 20 or 30 years ago to today's world? 5) How can policy makers increase the coherence of the early childhood service system?

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gains through age 12 than nonenrolled children. *The earlier the children were enrolled, the more enduring the gain*. This study represents one of the broadest and most long lasting benefits reported to date for an early childhood program.

Additional Research Needs

Although a few states have begun to examine the impact of child care subsidies on parents, children, employers, and communities, existing research has only tapped the surface. More research is needed to understand the relationship between child care and economic development. To what extent does the child care industry generate jobs and tax revenues? How do child care investments meet multiple needs -- improved learning opportunities for children, support for the adult workforce and economic development opportunities for communities? Are some approaches more effective than others in meeting these multiple needs? Will matching grant programs increase overall investment in child care within the private sector? In addition, future research needs to determine the effects of subsidized child care on other sources of public funding such as Medicare, Temporary Assistance for Needy Families (TANF), housing, food subsidies, and tax benefits.

CONCLUSION

Child care administrators can use research to guide the development of comprehensive, statewide child care delivery systems. But additional, thoughtful research is needed to help answer many of the questions cited in this report. To meet this need, researchers, policy makers, and practitioners must find new ways to build and institutionalize collaborative partnerships. Together these partners must identify key questions, collect pertinent data and determine how to use the findings to drive state-level and community planning.

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APPENDICES

Appendix A

Executive Summary
Data for Community Planning

Developed by Oregon Childhood Care and Education Data Project

EXECUTIVE SUMMARY May 1996

Data for Community Planning

Oregon Childhood Care and Education Data Project

Population Estimates:

Oregon has 580,745 children under age 13.

Between 1992 and 1994, the number of Oregon children grew by 4%. The number of children under age 5 grew faster than the number of children between age 5 and 12 (6.95% versus 2.31%).

Oregon children are nearly equally distributed into three household income groups; 32% in households with incomes under $25,000, 34% in households with incomes between $25,000 and $44,999, and 34% in households with incomes of $45,000 or greater.

Between 1992 and 1994, the number of children in lowest and highest income categories grew by 12.2% and 12.7%, while the number of children in the middle category declined by 9.1%.

42.3% of Oregon families with children under age 13 use paid child care. While the hours of purchased care varies widely from one family to another, Oregon families purchase an average 33 hours per week and spend an average $242 per month.

Use of Paid Child Care:

More than 35% of Oregon children (205,186) used paid child care arrangements.

Between 1992 and 1994, the number of children in paid child care increased 12.4%. The increase occurred primarily for children under age 5 (13%) and children between age 10 and 12 (15%).

Children in paid care use a variety of child care arrangements; 24% are cared for in their own homes, 40% are cared for in the homes of others, 29% use centers, and 6% use a variety of group activities.

Between 1992 and 1994, use of in-home care and center-based care increased 64.5% and 29.4% respectively. Use of care in the homes of others and group activities fell 9.8% and 10.4% respectively.

Factors that Drive Child Care Demand:

Age of Children	Demand decreases as the age of child increases. 43% of children under age 5 use paid care, compared to 30% of children ages 5 through 12.
Family Size	Demand decreases as family size increases. The average number of children in families with children under age 13 is 1.74. The average family size is 1.92 for families not using paid care and 1.51 for families using paid care.
Family Structure	Demand is directly related to the number of adults in a household and their employment status. Use is significant among families with two employed parents (52%) and even more so for families that have a solo parent who is employed (68%). Single solo employed parents have older aged children (65% of families have children over age 4), are more likely to have incomes below $25,000 (74%), and use substantially more hours of care than the average Oregon family (45 hours versus 33 hours).
Household Income	Demand increases with household income. 38.5% of families with incomes under $25,000 use paid care, compared with 42.9% for families with incomes between $25,000 and $44,999, and 49.1% for families with incomes of $45,000 or more. Although higher incomes relate to greater use of paid care, the average number of hours of purchased care decreases as incomes increase (39 hours for families under $25,000, 30 hours for families between $25,000 and $44,999, and 32 hours for families with incomes of $45,000 or greater).

Shape of Child Care Supply:

Oregon's Child Care Resource and Referral System lists 10,461 registered child care providers with the capacity to serve more than 86,000 children. There are an additional 6,245 family child care providers that are unlisted, with the capacity to serve an additional 22,480 children.

Of Oregon's 108,000 estimated child care slots, family child care providers account for 51%, child care centers account for 47% and family child care group homes account for 2%.

Oregon's child care supply benchmark is 25 agency-listed slots per 100 children under age 13. At present the statewide supply totals 16 slots per 100 children. On a county-by-county basis, the supply measure varies significantly. For example, Benton County is at 24 while Wasco County is at 10, Multnomah County is at 18 while Morrow County is at 9.

The Price of Child Care:

The price of child care varies widely from community to community, between various types of care and between the various ages of children served.

Prices generally fall as children increase in age. Child care centers and group homes generally charge higher prices than family child care providers. Prices are more closely grouped between types of providers in markets where competition is keen, particularly involving the care of preschool children.

Price is not a measure of cost, or value, or quality. Although price may be influenced by market forces, such as supply and demand, price is more frequently influenced by the highly personal nature of the relationship between provider and consumer.

Average monthly prices range from $490 for infant care provided by group homes to $200 for the care of school age children in child care centers.

The Affordability of Child Care:

The average Oregon family spends $242 per month on child care. Families with incomes in excess of $45,000 spend $269 per month, while families with incomes under $25,000 spend $229 per month.

Families with lower incomes purchase more hours of care per week than high income families (39 versus 32), but spend less for the care ($1.38 versus $2.16 per hour).

Oregon's benchmark for child care affordability is 10% of household income. 67% of Oregon households have child care expenses that are below the 10% benchmark. For families earning less than $25,000 per year, only 41% spend less than 10% on child care.

Low income families (below $25,000) spend an average of 37% of house income on child care, while high income families (over $45,000) spend an average of 5%.

Data Contributors

Oregon Childhood Care and Education Data Project • Oregon Employment Department • Oregon Child Care Resource and Referral Network • Oregon Progress Board • Oregon Survey Research Laboratory of the University of Oregon • Adult and Family Services Division of the Oregon Department of Human Resources • Regional Research Institute for Human Services at Portland State University • Center for Population Research and Census at Portland State University • Arthur Emlen and Associates.

Data Sources

1992 & 1994 Oregon Population Estimates • 1992 & 1994 Oregon Population Survey • 1994 & 1995 Market Rate Surveys of the Adult & Family Services Division • Child Care Provider Licensing and Registration Data of the Oregon Child Care Division • Referral and Provider Data of the Oregon Child Care Resource and Referral Network

ESTIMATED INCREASE IN SUBSIDIES NEEDED FOR WELFARE REFORM

IMPACT OF FAMILY TYPE ON USAGE OF PAID CHILD CARE

Family Type	All AFDC families	AFDC families on child care subsidy	All Oregon households with ch under 13	Usage of paid child care
Employed single parent	9.4%	91.0%	12.8%	na
Solo single parent	na	50.2%	6.8%	67.7%
Single parent	na	40.8%	6.0%	36.1%
Couple, one parent employed	2.2%	9.0%	36.1%	30.1%
Couple, both employed	0%	0%	39.9%	51.7%
No employed parent (incl JOBS)	88.3%	0%	11.2%	36.5%

DEMAND FOR CHILD CARE SUBSIDY FOR WORK OR TRAINING--AFDC HOUSEHOLDS ONLY

Formula:

Number of AFDC households
x % employed AFDC households in type
Number AFDC households of that type
x % child care usage for that family type
Number of AFDC households of type needing subsidy

Add number of each type of AFDC households to get the number of AFDC households needing subsidy.

Demand estimate: Child care subsidies needed for 21,173 AFDC households in order to participate in training or employment.

OR

DEMAND FOR CHILD CARE SUBSIDY FOR WORK OR TRAINING--OREGON HOUSEHOLDS WITH CHILDREN UNDER 13 AND EARNING UNDER $25,000

Formula:

All Oregon households with children under 13
x % households in family type
Number of households in type
x % family type earning < $25,000
Number household in family type earning <$25,000
x % households in family type earning <$25,000 using paid care
No OR households earning <$25,00 is family type needing subsidy

Add number of each type of Oregon households with children under 13 and earning under $25,000 to get the number of who need subsidy to avoid going on to welfare.

Demand estimate: Child care subsidies needed for 49,872 households earning <$25,000 in order to participate in training or employment.

GAP: Need of from 21,173 to 49,872 and existing subsidies for 10,405 households leave gap of from 10,708 to 39,407.

IMPACT ON SUPPLY: Given 133,911 Oregon households now using paid care, 8% to 29% increase in supply needed.

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Appendix B

Sliding Fee Scales: How to Make Them Work for Families
Tools For Development

Developed by Illinois Department of Public Aid

SLIDING FEE SCALES: HOW TO MAKE THEM WORK FOR FAMILIES

TOOLS FOR DEVELOPMENT

November 14, 1996

- Purpose: To present tools that can be used for establishing and comparing a variety of parent fees.

The Steps I arrived at were:

I. Identify the parameters you want the program to function within.

II. Determine the total potential resources needed to serve parents at various levels of income.

III. Establish criteria and format for assessing parent co-payment scales

IV. Develop a variety of parent co-payment fee scales.

V. Develop a format for assessing the amount of co-payment each scale will generate.

I. IDENTIFYING THE PARAMETERS

- Our first step was to define the parameters of the program we wanted to establish. These included:

Serve all working families below an established income level;
All families will pay a fee;
Services will be provided to all children through age 12;
Child care payments will go directly to the provider; and
Parents will be afforded the full range of choices of care.

II. DETERMINING POTENTIAL RESOURCES

- The first step is to establish the resources needed to serve families requiring child care subsidies.

- Illinois used Census Data by quartile of poverty to determine the number of families by income level. This data was only available by number of children, which we converted to families, using Census information.

- The next task was to determine the number of families that would be working, and of those the number who might need paid child care. For this we used the GAO report entitled: CHILD CARE: Child Care Subsidies Increase Likelihood that Low-Income Mothers will Work. December 1994.

- The number of families in each quartile that may need child care then needs to ebe costed out using state cost data.

III. CRITERIA TO ASSESS PARENT CO-PAYMENT SCALES

- An assessment method should be prepared to weigh the various co-payment scales you develop. Any assessment form you develop should incorporate the elements you find critical in the parent co-payment scales.

- Some itemto include are:
  - Resources the state has available;
  - The number of families that could be served with these resources;
  - The income cut off for families either as a percent of poverty, percent of the state median, or in dollars;
  - The parent co-payments generated
  - The state share required;
  - The monthly parent co-payment expressed in dollars and as a percentage of income for families at the lowest level of income; and
  - The monthly parent co-payment expressed in dollars and as a percentage of income for families at the highest level of income.

IV. DEVELOP PARENT CO-PAYMENT SCALE

- There are several approaches to parent co-payment scales:

  The first is to assess the fee as a percentage of the costs. Costs could be the state rate, the actual cost of care, or the 75th percentile of the market rate.

  The second method is to assess the fee as a percentage of parental income. This could be a flat percentage or a graduated percentage.

V. EXAMPLES OF PARENT CO-PAYMENT FEE SCALES

- Parent co-payment scales are labeled "Example 1" to "Example 3" and contain the fee scale. An analysis of the co-payment should be developed using the elements deemed most important. These might include:
  - The number of families by level of income;
  - Estimated resources needed;
  - The monthly parent co-payment at the midpoint of the income range;
  - Annualization of the parent co-payment; and
  - The estimated net cost to the state.

TABLE 1

ESTIMATED RESOURCES WORKSHEET

Income for a Family of 3 % of State Median % of Poverty	$6,490 14.87% 50.00%	$9,735 22.31% 75.00%	$12,980 29.74% 100.00%	$16,225 37.18% 125.00%	$19,470 44.62% 150.00%	$22,715 52.05% 175.00%	$23,883 54.73% 184.00%	$25,960 59.49% 200.00%
Number of Children by Age <5 5-11 12-17	 92,373 114,526 75,442	 33,831 43,103 32,510	 31,598 41,180 30,942	 35,332 46,461 34,338	 34,639 48,903 36,297	 41,001 55,816 39,131	 17,081 24,625 16,953	 25,672 36,739 26,074
Total	282,341	109,444	103,720	116,131	119,839	135,948	58,659	88,485
Number of Children in Poor Families 2.36 Non-Poor Families 1.84	119,743	46,416	43,988	63,063	65,077	73,825	31,854	48,051
% of Families Working According to GAO Report	29% 34,725	29% 13,461	29% 12,757	43% 27,096	43% 27,961	43% 31,719	43% 13,686	43% 20,645
% of Families Needing Paid Care According to GAO Report	45% 15,588	45% 6,042	45% 5,726	63% 17,035	63% 17,579	63% 19,942	63% 8,605	63% 12,980
Average Monthly State Costs $470	$7,326,244	$2,839,876	$2,691,348	$8,006,500	$8,262,143	$9,372,757	$4,044,168	$6,100,482
Estimated Annual Resources Needed	$87,914,924	$34,078,511	$32,296,180	$96,077,995	$99,145,713	$112,473,080	$48,530,014	$73,205,788
Cumulative Estimated Resources Needed	$87,914,924	$121,993,435	$154,289,615	$250,367,610	$349,513,323	$461,986,403	$510,516,418	$583,722,206

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Evaluation of Options

		Scale Based on % of Care	Scale Based on Flat % of Income	Scale Based on Graduated % of Income
Available Resources		$250,000,000	$250,000,000	$250,000,000
% of Poverty Reached w/o exceeding Resource		125.00%	150.00%	150.00%
Number of Families that Can Be Served		44,391	61,970	61,970
Income Cut-off for a Family of 3		$16,225	$19,470	$19,470
Parent Fees Generated		$43,444,840	$119,237,577	$105,199,870
State Share Needed		$206,922,770	$230,275,746	$244,313,453
Monthly Fee for a Family Earning $5.15 Hr. Working 20 Hours/Week	License Exempt	$16		
	Licensed Center	$55	$74	$52
Fees as a Percent of Income	License Exempt	3.60%		
	Licensed Center	12.72%	16.67%	11.65%
Monthly Fee at Time of Cancellation	License Exempt	$70		
	Licensed Center	$248	$273	$269
Fees as a Percent of Income	License Exempt	5.18%		
	License Center	18.32%	16.81%	16.56%

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EXAMPLE 1

Percentage of the state rate
Income by 5% increments of poverty

			% of State	Monthly Fees			
Family Size	2	3	Rate	License Exempt	Licensed	Licensed	
% of Poverty				Homes	Centers	Homes	
				$194.55	$688.08	$368.31	
	Gross Annual Incom						
40%	$4,144	$5,192	8.00%	$15.56	$55.05	$29.46	Parent Co-Pay
45%	$4,662	$5,841	9.00%	3.60%	12.72%	6.81%	% of Income
50%	$5,180	$6,490	10.00%				
55%	$5,698	$7,139	11.00%				
60%	$6,216	$7,788	12.00%				
65%	$6,734	$8,437	13.00%				
70%	$7,252	$9,086	14.00%				
75%	$7,770	$9,735	15.00%				
80%	$8,288	$10,384	17.00%				
85%	$8,806	$11,033	19.00%				
90%	$9,324	$11,682	21.00%				
95%	$9,842	$12,331	23.00%				
100%	$10,360	$12,980	26.00%				
105%	$10,878	$13,629	28.00%				
110%	$11,396	$14,278	30.00%				
115%	$11,914	$14,927	32.00%	$62.26	$220.19	$117.86	Parent Co-Pay
120%	$12,432	$15,576	34.00%	5.00%	17.70%	9.47%	% of Income
125%	$12,950	$16,225	36.00%				
130%	$13,468	$16,874	38.00%				
135%	$13,986	$17,523	40.00%				
140%	$14,504	$18,172	42.00%				
145%	$15,022	$18,821	44.00%				
150%	$15,540	$19,470	47.00%				
155%	$16,058	$20,119	50.00%				
160%	$16,576	$20,768	53.00%				
165%	$17,094	$21,417	56.00%				
170%	$17,612	$22,066	59.00%				
175%	$18,130	$22,715	62.00%				
180%	$18,648	$23,364	65.00%				
185%	$19,166	$24,013	68.00%				
190%	$19,684	$24,662	71.00%	$138.13	$488.54	$261.50	Parent Co-Pay
195%	$20,202	$25,311	74.00%	6.72%	23.77%	12.72%	% of Income

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EXAMPLE 1

Percentage of the state rate

Income by 5% increments of poverty

Assumes a family of 3 with 2 children in care

	Percent of Poverty							
Annual Gross Income	50.00% $6,490	75.00% $9,735	100.00% $12,980	125.00% $16,225	150.00% $19,470	175.00% $22,715	184.00% $23,883	200.00% $25,960
Number of Families Needing Care	15,588	6,042	5,726	17,035	17,579	19,942	8,605	12,980
Est. Resource Needed for Care	$87,914,924	$34,078,511	$32,296,180	$96,077,995	$99,145,713	$112,473,080	$48,530,014	$73,205,788
Monthly Family Co-Payment Annual Parent Co-Payment % of Parent Income	$24 $282 4.35%	$56 $677 6.95%	$89 $1,072 8.26%	$141 $1,692 10.43%	$188 $2,256 11.59%	$249 $2,989 13.16%	$291 $3,497 14.64%	$334 $4,004 15.43%
Annual Estimated Parent Share	$4,395,746	$4,089,421	$6,136,274	$28,823,398	$39,658,285	$59,610,732	$30,088,609	$51,976,110
Estimated Net Cost to State	$83,519,178	$29,989,090	$26,159,906	$67,254,596	$59,487,428	$52,862,348	$18,441,405	$21,229,679
Estimated Cumulative Parent Share	$4,395,746	$8,485,168	$14,621,442	$43,444,840	$83,103,126	$142,713,858	$172,802,467	$224,778,576
Estimated Cumulative State Share	$83,519,178	$113,508,267	$139,668,173	$206,922,770	$266,410,198	$319,272,545	$337,713,951	$358,943,630
Estimated Cumulative Families	15,588	21,630	27,356	44,391	61,970	81,912	90,517	103,497

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Example 2

Constant Percentage of Income based on Number of Children in Care

Increment of $500 in income

			Children in care					
			1		2		3 or More	
			Proposed Weekly Fee	%	Proposed Weekly Fee	%	Proposed Weekly Fee	%
$0	-	$5,000	$5		$5		$5	
$5,001	-	$5,500	$15	15%	$17	17%	$20	20%
$5,501	-	$6,000	$17	15%	$19	17%	$22	20%
$6,001	-	$6,500	$18	15%	$20	17%	$24	20%
$6,501	-	$7,000	$19	15%	$22	17%	$26	20%
$7,001	-	$7,500	$21	15%	$24	17%	$28	20%
$7,501	-	$8,000	$22	15%	$25	17%	$30	20%
$8,001	-	$8,500	$24	15%	$27	17%	$32	20%
$8,501	-	$9,000	$25	15%	$29	17%	$34	20%
$9,001	-	$9,500	$27	15%	$30	17%	$36	20%
$9,501	-	$10,000	$28	15%	$32	17%	$38	20%
$10,001	-	$10,500	$30	15%	$34	17%	$39	20%
$10,501	-	$11,000	$31	15%	$35	17%	$41	20%
$11,001	-	$11,500	$32	15%	$37	17%	$43	20%
$11,501	-	$12,000	$34	15%	$38	17%	$45	20%
$12,001	-	$12,500	$35	15%	$40	17%	$47	20%
$12,501	-	$13,000	$37	15%	$42	17%	$49	20%
$13,001	-	$13,500	$38	15%	$43	17%	$51	20%
$13,501	-	$14,000	$40	15%	$45	17%	$53	20%
$14,001	-	$14,500	$41	15%	$47	17%	$55	20%
$14,501	-	$15,000	$43	15%	$48	17%	$57	20%
$15,001	-	$15,500	$44	15%	$50	17%	$59	20%
$15,501	-	$16,000	$45	15%	$51	17%	$61	20%
$16,001	-	$16,500	$47	15%	$53	17%	$63	20%
$16,501	-	$17,000	$48	15%	$55	17%	$64	20%
$17,001	-	$17,500	$50	15%	$56	17%	$66	20%
$17,501	-	$18,000	$51	15%	$58	17%	$68	20%
$18,001	-	$18,500	$53	15%	$60	17%	$70	20%
$18,501	-	$19,000	$54	15%	$61	17%	$72	20%
$19,001	-	$19,500	$56	15%	$63	17%	$74	20%
$19,501	-	$20,000	$57	15%	$65	17%	$76	20%
$20,001	-	$20,500	$58	15%	$66	17%	$78	20%
$20,501	-	$21,000	$60	15%	$68	17%	$80	20%
$21,001	-	$21,500	$61	15%	$69	17%	$82	20%
$21,501	-	$22,000	$63	15%	$71	17%	$84	20%
$22,001	-	$22,500	$64	15%	$73	17%	$86	20%
$22,501	-	$23,000	$66	15%	$74	17%	$88	20%
$23,001	-	$23,500	$67	15%	$76	17%	$89	20%
$23,501	-	$24,000	$69	15%	$78	17%	$91	20%
$24,001	-	$24,500	$70	15%	$79	17%	$93	20%
$24,501	-	$25,000	$71	15%	$81	17%	$95	20%

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EXAMPLE 2

Percentage of the state rate

Income by 5% increments of poverty

Assumes a family of 3 with 2 children in care

	Percent of Poverty							
Annual Gross Income	50.00% $6,490	75.00% $9,735	100.00% $12,980	125.00% $16,225	150.00% $19,470	175.00% $22,715	184.00% $23,883	200.00% $25,960
Number of Families Needing Care	15,588	6,042	5,726	17,035	17,579	19,942	8,605	12,980
Est. Resource Needed for Care	$87,914,924	$34,078,511	$32,296,180	$96,077,995	$99,145,713	$112,473,080	$48,530,014	$73,205,788
Monthly Family Co-Payment Annual Parent Co-Payment % of Parent Income	$22 $260 4.01%	$117 $1,403 14.41%	$159 $1,913 14.73%	$209 $2,507 15.45%	$251 $3,017 15.90%	$301 $3,612 15.90%	$329 $3,952 16.55%	$351 $4,207 $16.21%
Annual Estimated Parent Share	$4,052,504	$8,474,686	$10,951,628	$42,715,137	$53,043,622	$72,038,451	$34,008,577	$54,610,302
Estimated Net Cost to State	$83,862,420	$25,603,825	$21,344,552	$53,362,858	$46,102,091	$40,434,629	$14,521,437	$18,595,486
Estimated Cumulative Parent Share	$4,052,504	$12,527,190	$23,478,818	$66,193,955	$119,237,577	$191,276,029	$225,284,606	$279,894,908
Estimated Cumulative State Share	$83,862,420	$109,466,245	$130,810,797	$184,173,655	$230,275,746	$270,710,375	$285,231,812	$303,827,298
Estimated Cumulative Families	15,588	21,630	27,356	44,391	61,970	81,912	90,517	103,497

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Example 3

GRADUATED PERCENTAGE WITH ADDITIONAL CHARGE PER CHILD

Increment of $1,000 in income

Number of Children in care			1		2		3	
			Proposed Weekly Fee	%	Proposed Weekly Fee	%	Proposed Weekly Fee	%
$0	-	$5,000	$5	5%	$5	5%	$5	5%
$5,001	-	$6,000	$7	6%	$12	10%	$15	13%
$6,001	-	$7,000	$9	7%	$14	10%	$18	13%
$7,001	-	$8,000	$11	7%	$16	10%	$21	14%
$8,001	-	$9,000	$13	8%	$18	10%	$23	13%
$9,001	-	$10,000	$17	9%	$22	11%	$27	14%
$10,001	-	$11,000	$21	10%	$26	12%	$31	15%
$11,001	-	$12,000	$25	11%	$30	13%	$35	15%
$12,001	-	$13,000	$29	12%	$34	14%	$39	16%
$13,001	-	$14,000	$33	12%	$38	14%	$43	16%
$14,001	-	$15,000	$37	13%	$42	15%	$47	16%
$15,001	-	$16,000	$41	13%	$46	15%	$51	17%
$16,001	-	$17,000	$45	14%	$50	15%	$55	17%
$17,001	-	$18,000	$49	14%	$54	16%	$59	17%
$18,001	-	$19,000	$53	15%	$58	16%	$63	17%
$19,001	-	$20,000	$57	15%	$62	16%	$67	17%
$20,001	-	$21,000	$62	15%	$67	17%	$72	18%
$21,001	-	$22,000	$67	16%	$72	17%	$77	18%
$22,001	-	$23,000	$72	16%	$77	17%	$82	19%
$23,001	-	$24,000	$77	17%	$82	18%	$87	19%
$24,001	-	$25,000	$82	17%	$87	18%	$92	19%
$25,001	-	$26,000	$87	17%	$92	18%	$97	19%
$26,001	-	$27,000	$92	18%	$97	19%	$102	20%
$27,001	-	$28,000	$97	18%	$102	19%	$107	20%
$28,001	-	$29,000	$102	18%	$107	19%	$111	20%
$29,001	-	$30,000	$107	19%	$112	19%	$115	20%
$30,001	-	$31,000	$112	19%	$117	20%	$119	20%
$31,001	-	$32,000	$117	19%	$122	20%	$124	20%
$32,001	-	$33,000	$122	19%	$127	20%	$128	20%
$33,001	-	$34,000	$127	19%	$131	20%	$132	20%
$34,001	-	$35,000	$132	20%	$135	20%	$136	20%
$35,001	-	$36,000	$137	20%	$139	20%	$140	20%
$36,001	-	$37,000	$142	20%	$143	20%	$144	20%
$37,001	-	$38,000	$147	20%	$147	20%	$148	20%

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EXAMPLE 3

Percentage of the state rate

Income by 5% increments of poverty

Assumes a family of 3 with 2 children in care

	Percent of Poverty							
Annual Gross Income	50.00% $6,490	75.00% $9,735	100.00% $12,980	125.00% $16,225	150.00% $19,470	175.00% $22,715	184.00% $23,883	200.00% $25,960
Number of Families Needing Care	15,588	6,042	5,726	17,035	17,579	19,942	8,605	12,980
Est. Resource Needed for Care	$87,914,924	$34,078,511	$32,296,180	$96,077,995	$99,145,713	$112,473,080	$48,530,014	$73,205,788
Monthly Family Co-Payment Annual Parent Co-Payment % of Parent Income	$22 $260 4.01%	$78 $936 9.61%	$130 $1,560 12.02%	$182 $2,184 13.46%	$234 $2,808 14.42%	$312 $3,744 16.48%	$355 $4,264 17.85%	$377 $4,524 17.43%
Annual Estimated Parent Share	$4,052,504	$5,655,148	$8,932,299	$37,201,808	$49,358,111	$74,657,237	$36,687,245	$58,715,871
Estimated Net Cost to State	$83,862,420	$28,423,363	$23,363,882	$58,876,186	$49,787,602	$37,815,843	$11,842,769	$14,489,918
Estimated Cumulative Parent Share	$4,052,504	$9,707,652	$18,639,950	$55,841,759	$105,199,870	$179,857,108	$216,544,353	$275,260,223
Estimated Cumulative State Share	$83,862,420	$112,285,783	$135,649,665	$194,525,851	$244,313,453	$282,129,296	$293,972,065	$308,461,983
Estimated Cumulative Families	15,588	21,630	27,356	44,391	61,970	81,912	90,517	103,497

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